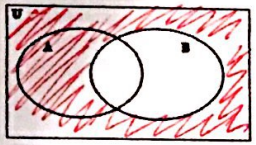
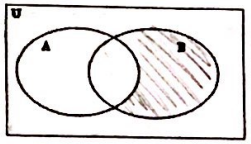
Shade the following Venn Diagrams:

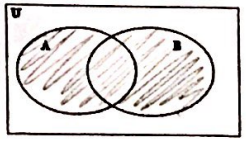
B'



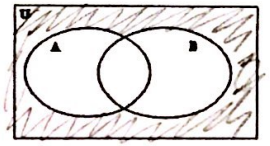
$A' \cap B$



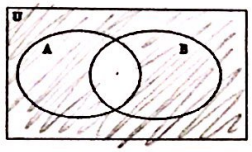
$A \cup B$



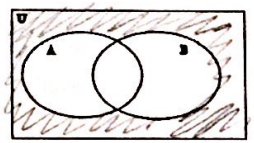
$(A \cup B)'$



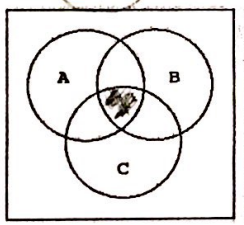
$(A \cap B)'$



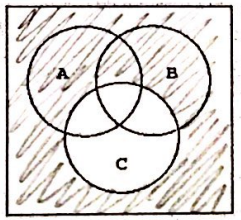
$A' \cap B'$



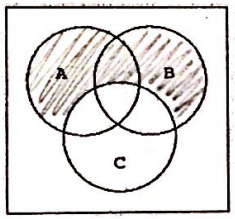
$A \cap B \cap C$



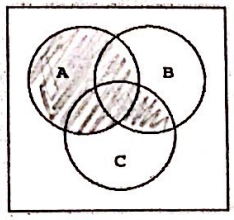
C'



$A \cup B \cap C'$



$A \cup (B \cap C)$



Addition Rule useful for finding the union of 2 events

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

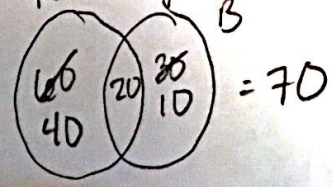
$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$

Ex. In a survey respondents checked off boxes to indicate which type of music they like. A total of 60% checked rap music, a total of 30% checked blues and 20% checked both. What percent liked at least one type of music? (You may also draw a Venn Diagram to help you visualize)

$P(R \text{ or } B) = P(R) + P(B) - P(R \text{ and } B)$

$= .60 + .30 - .20$

$= .70$



$= 70$

Name : Key

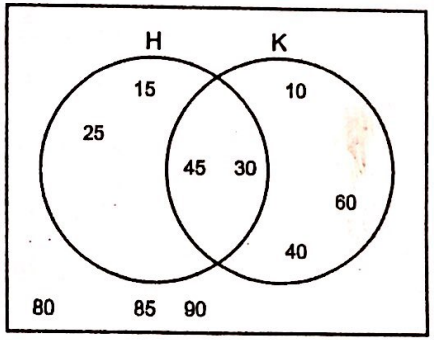
Teacher :

Score :

Date :

Solve the Problems Using the Venn Diagrams

1)



45,30

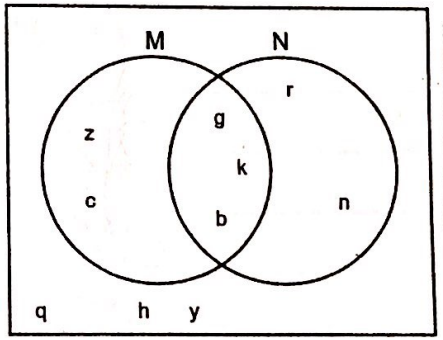
$(H \cap K)'$ = 15, 25, 10, 60, 40, 80, 85, 90

H' = 10, 60, 40, 80, 85, 90

K' = 15, 25, 80, 85, 90

$H \cap K'$ = 15, 25

2)



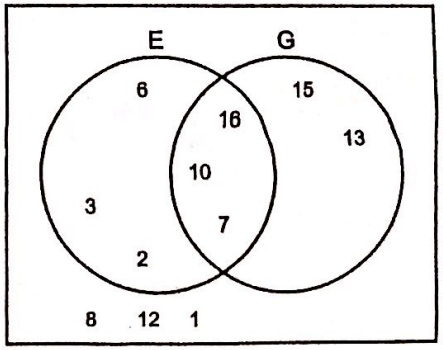
$M \cup N$ = g, k, b

M = z, c, g, k, b

$(M \cup N)'$ = q, h, y

$N' \cup M$ = z, c, g, h, y, g, k, b

3)



E = 6, 3, 2, 16, 10, 7

$G' \cap E'$ = 8, 12, 1

$G \cap E$ = 16, 10, 7

$(G \cap E)'$ = 6, 3, 2, 15, 13, 8, 12, 1